

Inventories & Managing Potential Contamination Sources (PCSs)



Elk River
Charleston, WV



Emergencies: Geographic Response Planning

Exeter and Lamprey Rivers

Identify most sensitive natural, cultural or significant economic resources at risk from oil spills.

Describe and prioritize response strategies, tactics & equipment

Plans will be done June 2016

Partnership with EPA Region 1



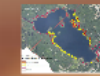
Source: EPA Region 1

PCS Management

Failing Septic Systems On The Shores of Lake Waubesa (Meredith's Water Supply)



Lake Waubesa - (Meredith's Primary Source of DW) - First recorded significant toxic algae bloom occurred in November 2004



...Phosphorus concentrations are increasing...the project focused on shoreline septic systems.



Septic Evaluation & Repair (DES Funded)
24 evaluations performed
13 systems in failure (54%)
10 repaired using 319 funds

Source: Lake Waubesa Watershed Council
phl@waubesa.org, waubesa.org

What's Possible? Partnerships to Protect Drinking Water

NH Planner's Spring Meeting - May 6, 2016



Source Water Collaborative Members:

American Water Works Association
Association of Clean Water Administrators
Association of Metropolitan Water Agencies
Association of State and Territorial Health Officials
Association of State Drinking Water Administrators
Clean Water Action
Clean Water Fund
Environmental Finance Center Network
Ground Water Protection Council
Groundwater Foundation
National Association of Conservation Districts
National Association of Counties
National Ground Water Association
National Rural Water Association
North American Lake Management Society
River Network
Rural Community Assistance Partnership
The Trust for Public Land
U.S. Department of Agriculture - Farm Service
U.S. Environmental Protection Agency
U.S. Forest Service (Northwestern Area)
U.S. Geological Survey
Water Systems Council
Western Water Resources Laboratory

Take priority actions to protect sources of drinking water, working with **key partners**.

Strategic Conservation and Open Space

For Example ... "Over \$5,000,000 in Conservation Funding Will Help Protect Drinking Water in 2016"

Madbury - 5,100 ft of frontage on the Oyster River to be conserved.

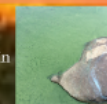


Emerging Contaminants

Cyanobacteria...

Expanding cyanobacteria/pigment monitoring and bloom watch/tracking in source waters.

DES Limnology Lab developing capacity to quick-test for cyanotoxin with ELISA; PHL developing test capability for specific toxins



"I think this is a wake-up call" U.S. Sen. Bob Portman (R, Ohio) (Toledo, 2014)

NHDES developing a protocol for responding to suspected blooms in source water

Source Water Protection Involves....

Identifying / Protecting Drinking Water Resource Areas

Public education and outreach



Inventories / Evaluating Threats - (PCSs)

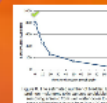


Actions that prevent, reduce, or eliminate risks to the drinking water supply



www.epa.gov/owp/protecting-drinking-water/protecting-drinking-water

Exposure, Health Risks and Private Well Water



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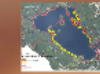
Source: EPA, Inc.

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Notes: Lake Waubesa is the source of Meredith's drinking water. The project was funded by the State of Wisconsin, Lake Waubesa Water Supply Association, and the Lake Waubesa Water Supply Association.

What's Possible? Partnerships to Protect Drinking Water

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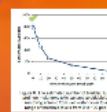


Actions that prevent, reduce, or eliminate risks to the drinking water supply



www.epa.gov/owow/owp/owp-drinking-water-protection-basics.html

Exposure, Health Risks and Private Well Water



What's Possible? Partnerships to Protect Drinking Water

NH Planner's Spring Meeting - May 6, 2016



www.waterprotection.ca/images/multibarriera.jpg

National Source Water Collaborative Members!

American Planning Association

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Smart Growth America

The Trust for Public Land
U.S. Department of Agriculture - Farm Service
U.S. Environmental Protection Agency
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Water Systems Council

<http://sourcewatercollaborative.org/about/>

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Inventorying /
Evaluating Threats
~(PCSs)



Actions that prevent, reduce, or eliminate
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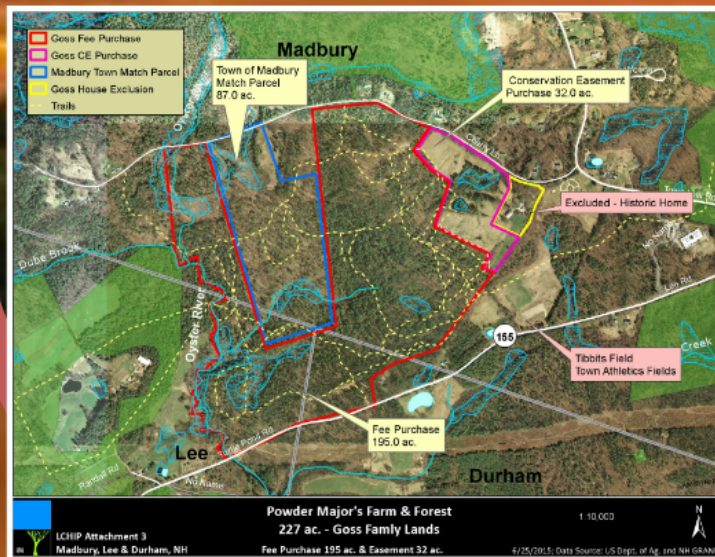


www.epa.gov/sourcewaterprotection/source-water-protection-basics#what

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NHDES' Water Supply Land Protection Grant Program
awarded \$1.3 million in May 2015

Funding	Project Description
\$635,000	Don of Berry to protect 63 acres in the watershed protection area for the 300-year-old system
\$270,775	Southwest Land Trust of NH (SLT) to protect 60 acres in Massachusetts Water Works' Lake Massabesic watershed
\$892,175	SLT to protect 100 acres in Salem Water Department's Arlington Pond watershed

LCHIP and NHDES' (ARM) Program will fund 26 conservation projects totaling \$4.1 million
\$2.7 million of that funding will help protect 4,300 sensitive drinking water areas for eight public water system sources.

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Charlestown, WV

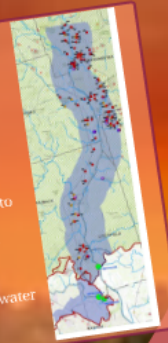
Elk River Response - NH

Statewide: > 5,000 petroleum and EPCRA chemical storage tanks

DES mapped "Tank" facilities and their emergency contact info to all 37+ PWSs using surface water as sources.

NHDES funded on-site visits to 67 sites to verify location and contents of large chemical tanks along Merrimack River.

DES and EPA directing compliance inspections within sensitive drinking water areas.



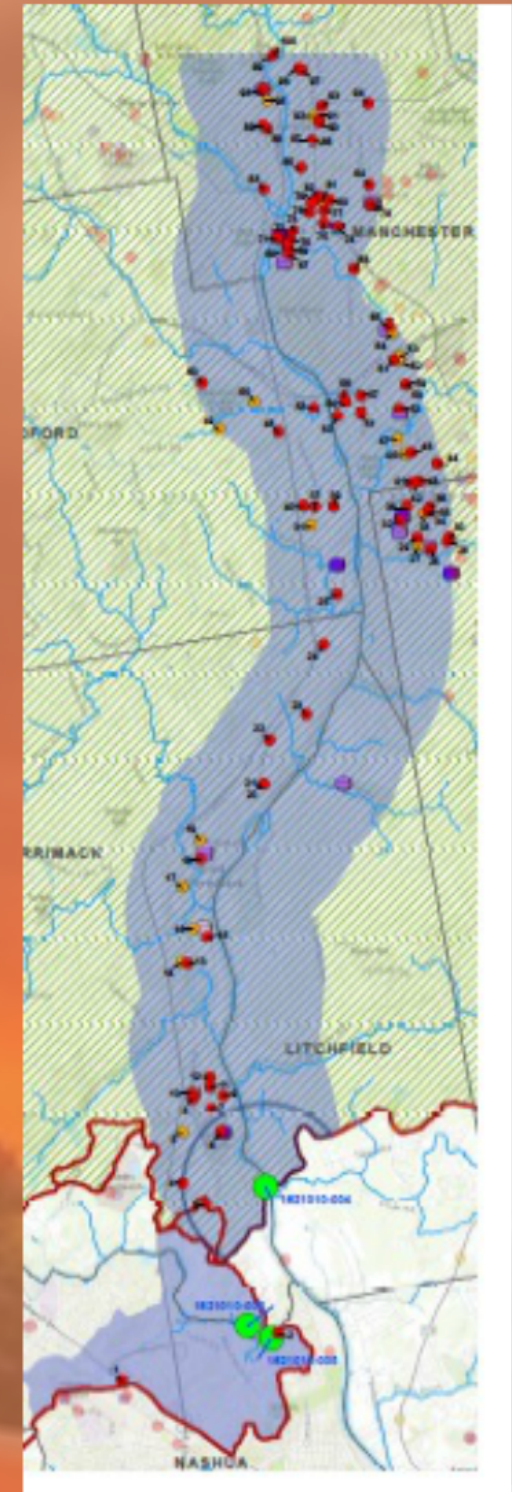
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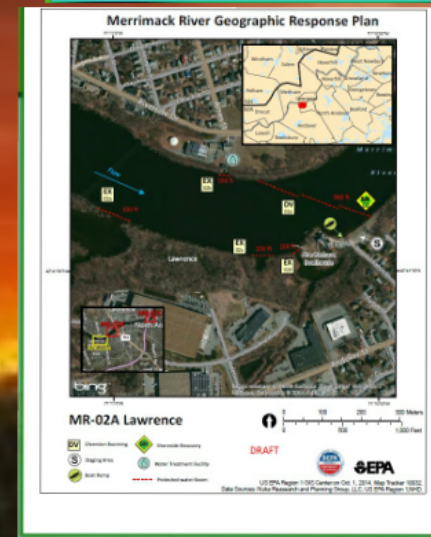
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Source: Nuka, Inc.

Merrimack River Geographic Response Plan



MR-02A Lawrence

- DV Diversion Booming
- S Staging Area
- SR Shoreside Recovery
- WTF Water Treatment Facility
- BR Boat Ramp
- Protected-water Boom

DRAFT



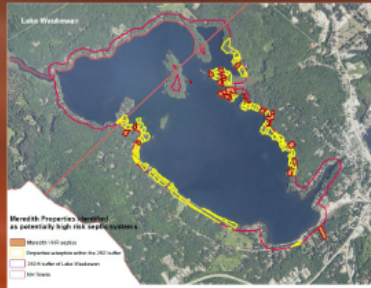
US EPA Region 1 GIS Center on Oct. 1, 2014. Map Tracker 10032.
Data Sources: Nuka Research and Planning Group, LLC, US EPA Region 1, NHD.

PCS Management

Failing Septic Systems On The Shores of Lake Waukewan (Meredith's Water Supply)



Lake Waukewan - (Meredith's Primary Source of DW) - First recorded significant toxic algae bloom occurred in November 2004



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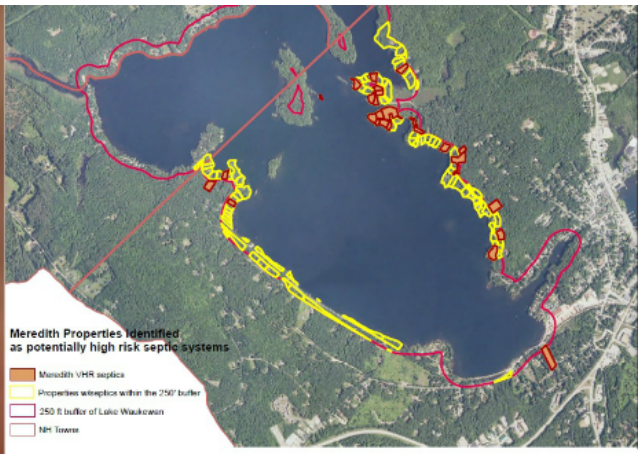


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Photo Credit:
Pat Tarpey

Source: <http://www.meredithnh.org/Joomla/pdfdocs/WWAC%20Management%20Plan.pdf>



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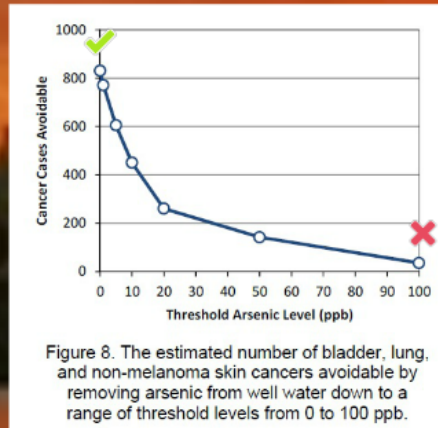
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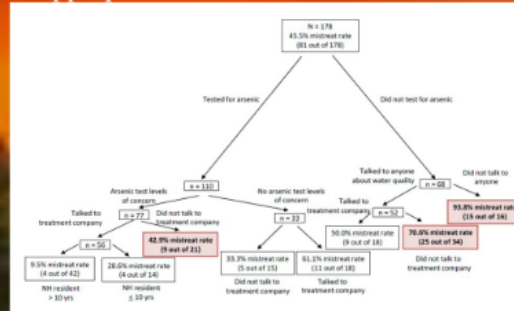


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Exposure, Health Risks and Private Well Water



High Percentage of Private Well Owners Use Inappropriate Treatment for Arsenic



NHDES Web Tool



Municipal Partners Involved in Testing

February 2015

Guidance to Refine the Potable Water Definition in New Hampshire Municipal Building Codes

You can't see it. You can't smell it. You can't taste it.

IS THERE ARSENIC IN YOUR WELL WATER?

\$15 dollars It will cost to test your well water for arsenic.

10 minutes It will take to collect a water sample.

3-5 years It will take to see the results of the test.

WELL WATER:

- The first step to knowing your family water is to find your water source and location.
- You can find your water source by looking at the map on the back of your water bill.
- You can also find your water source by looking at the map on the back of your water bill.
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TESTING YOUR WATER IS EASY:

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FOR TODAY, AND THEN AGAIN EVERY THREE TO FIVE YEARS.

Bedford
Bow
Epping
Londonderry
Peterborough
Plaistow
Rindge
Nottingham
Strafford
Tuftonborough
Windham

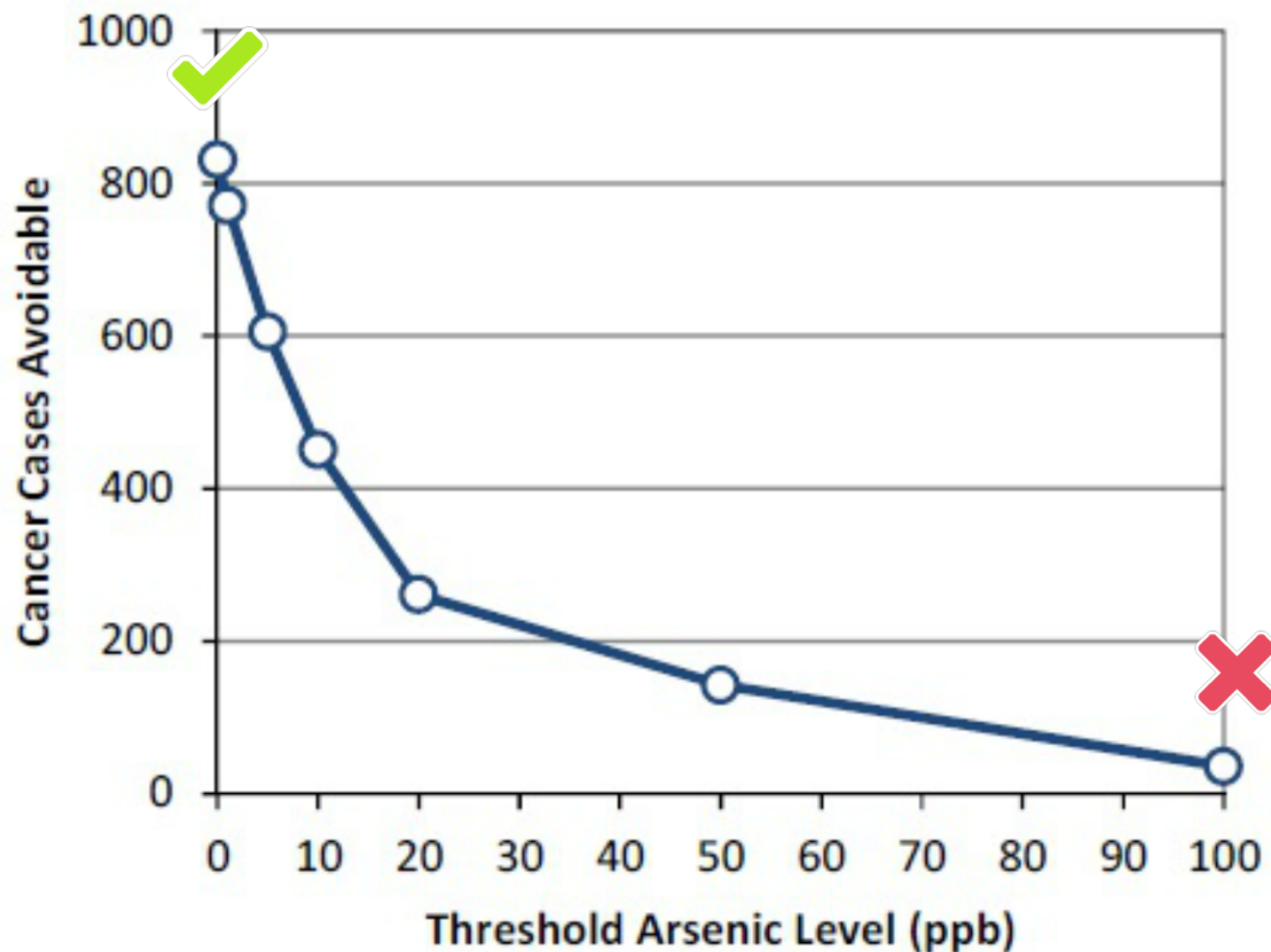
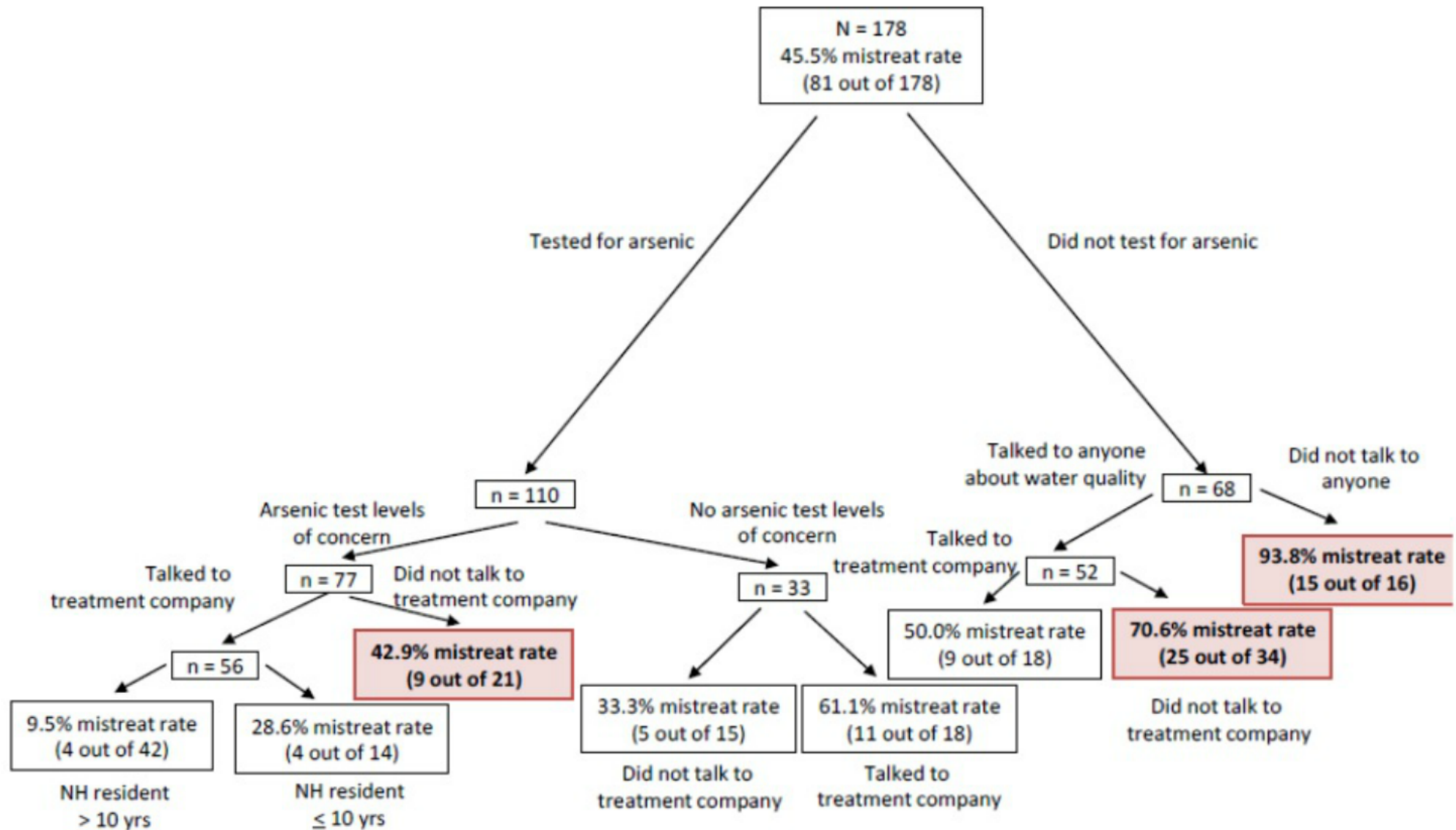


Figure 8. The estimated number of bladder, lung, and non-melanoma skin cancers avoidable by removing arsenic from well water down to a range of threshold levels from 0 to 100 ppb.

High Percentage of Private Well Owners Use Inappropriate Treatment for Arsenic



Source: ARSENIC IN PRIVATE WELLS IN NH, YEAR 1 FINAL REPORT Public Health Contract Annual Performance Report CDC Grant #1U53/EH001110-01 (2014)

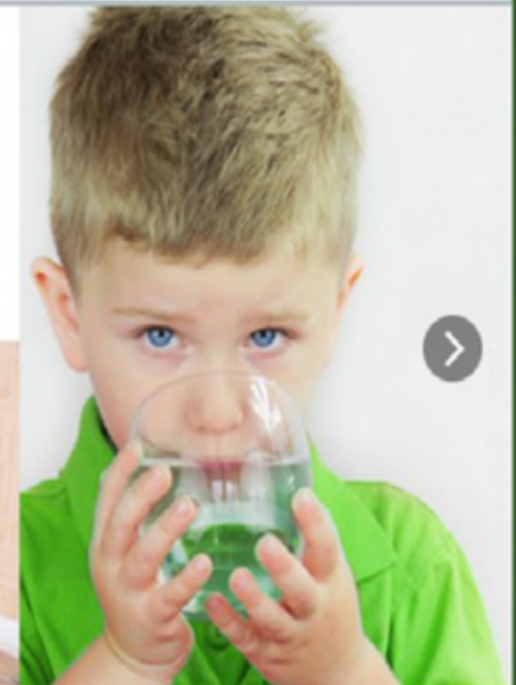
NHDES Web Tool

[PUBLIC](#)[GOVERNMENT](#)[BUSINESS](#)[A to Z LIST](#)

The NHDES Be Well Informed Guide

PROTECT YOUR FAMILY'S HEALTH AND HOME

INFORMATION AND GUIDANCE FOR
TREATING YOUR WELL WATER



The **Be Well Informed** Guide from NHDES is designed to help you understand your water test results and, if your well water has commonly found pollutants in it, provide information about health concerns and water treatment choices. New Hampshire is fortunate to have an abundance of clean groundwater, and nearly half of New Hampshire's residents (over 500,000 people) rely solely upon domestic wells (also called "private wells") as their primary source of drinking water. While many private wells provide safe drinking water, certain pollutants like arsenic, iron and manganese are sometimes present in groundwater at levels that can affect your health and home.

NHDES recommends private well owners test their well water every three to five years for pollutants commonly found in New Hampshire's groundwater. This group of commonly found pollutants is listed in the NHDES Private Well Brochure and is referred to as the "Standard Analysis." The Be Well Informed Guide evaluates the pollutants that are part of the Standard Analysis. NHDES recommends that you have your water tested at a **NHCLAP accredited laboratory**. When you have your water tested, your test results will be summarized in the form of a **lab report**.

[DES Private Well Brochure](#)

[Accredited Labs in NH](#)

[NHDES Private Well Testing Program](#)

[Questions or Comments](#)



Municipal Partners Involved in Testing

Bedford
Bow
Epping
Londonderry
Peterborough
Plaistow
Rindge
Nottingham
Strafford
Tuftonborough
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Developed through a collaborative effort of the
New Hampshire Building Officials Association,
NH Health Officers Association, NH Planners
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15
dollars

is all it costs to test your
well water for arsenic



10
minutes

is all it takes to
collect a water sample



3-5
years

is the recommended
frequency for testing

WELL WATER.

psire well water because of the
f rock.

serious health issues over time,
dder, skin, and lung cancer.

ible to the effects of arsenic

o do not rely on the results of
vels vary from house to house.

such as boiling, pitcher filters,
love arsenic.

lable to help! We suggest you start
-toxmetal/arsenic

TESTING YOUR WATER IS EASY.

- The **first step to keeping your family safe** is to test your
well water for arsenic and other contaminants.

- The cost to test your water ranges from about **\$15 for
just arsenic** to \$85 for a standard test of the most
common contaminants.

- **Sample collection bottles are easily available** from state
or private labs. Bottles **can be mailed to you** and samples
can be mailed back. Directions will be included in your kit.

- If testing shows that you have unsafe levels of arsenic, there
are **reliable options** to address it.

- For a list of certified labs, visit:
<http://www2.des.nh.gov/CertifiedLabs>

OR TODAY, AND THEN AGAIN EVERY THREE TO FIVE YEARS.

